Cancer Incidence Rates in New Jersey's Ten Most Populated Municipalities 1998-2002

Prepared by:
Pamela K. Agovino, MPH
Xiaoling Niu, MS
Kevin A. Henry, MA, PhD
Lisa M. Roche, MPH, PhD
Betsy A. Kohler, MPH, CTR
Susan Van Loon, RN, CTR

Cancer Epidemiology Services
New Jersey Department of Health and Senior Services

Eddy A. Bresnitz, MD, MS
Deputy Commissioner/State Epidemiologist
Center for Cancer Initiatives
New Jersey Department of Health and Senior Services

Fred M. Jacobs, M.D., J.D.
Commissioner
New Jersey Department of Health and Senior Services

Richard J. Codey Acting Governor

Cancer Epidemiology Services
New Jersey Department of Health and Senior Services
PO Box 369
Trenton, NJ 08625-0369
(609) 588-3500
www.state.nj.us/health

December 2005

ACKNOWLEDGMENTS

The following staff of the New Jersey State Cancer Registry and the Cancer Surveillance Program of the Cancer Epidemiology Services were involved in the collection, quality assurance and preparation of the data on incident cases of cancer in New Jersey:

Anne Marie Anepete, CTR

Pamela Beasley Tara Blando

Donna Brown, CTR

Stasia S. Burger, MS, CTR

Emiliano Cornago

Kathleen Diszler, RN, CTR

Thomas English, CTR Lorraine Fernbach, CTR

Ruthann Filipowicz Raj Gona, MPH, MA

Maria Halama, MD, CTR

Essam Hanani, MD Marilyn Hansen, CTR

Joan Hess, RN, CTR

Margaret Hodnicki, RN, CTR

Yvette Humphries Nicole Jackson Jamal Johnson

Linda Johnson, CTR

Anna Jones

Catherine Karnicky, CTR

Harrine Katz, CTR

Joan Kay, CTR

Thuy Lam, MPH

Henry Lewis, MPH

Helen Martin, CTR Ilsia Martin, MS

Warin Martana CTD

Kevin Masterson, CTR

Carl C. Monetti

John Murphy, CTR

Lisa Paddock, MPH

Maithili Patnaik, CTR

Theresa Pavlovcak, CTR

Karen Pawlish, MPH, Sc.D

Barbara Pingitor

Gladys Pyatt-Dickson, CTR

Karen Robinson-Frasier, CTR

Antonio Savillo, MD, CTR

Suzanne Schwartz, MS, CTR

Rekha Tharwani, MD, CTR

Celia Troisi, CTR

Helen Weiss, RN, CTR

Michael Wellins

Homer Wilcox III

We also acknowledge New Jersey hospitals, laboratories, physicians, dentists, and the states of Delaware, Florida, Maryland, New York, North Carolina, and Pennsylvania who reported cancer cases to the New Jersey State Cancer Registry.

Cancer Epidemiology Services, including the New Jersey State Cancer Registry, receives support from the Surveillance, Epidemiology, and End Results Program of the National Cancer Institute under contract N01-PC-45025-40, the National Program of Cancer Registries, Centers for Disease Control and Prevention under cooperative agreement U55/CCU221914, and the State of New Jersey.

TABLE OF CONTENTS

Acknowle	edgments	. i
Introducti	on	1
Technical	Notes	3
Ne	ew Jersey State Cancer Registry	3
Da	ata Sources and Specifications for this Report	. 5
Da	ata Presentation	8
Reference	·S	. 10
Glossary.		11
Map and	l Tables	. 12
Map 1.	Map of Ten Most Populated Municipalities in New Jersey	. 13
Table 1.	Cancer Incidence Counts and Rates by Cancer Type and Gender Newark City and New Jersey, 1998-2002.	14
Table 2.	Cancer Incidence Counts and Rates by Cancer Type and Gender Jersey City and New Jersey, 1998-2002	. 15
Table 3.	Cancer Incidence Counts and Rates by Cancer Type and Gender Paterson City and New Jersey, 1998-2002	. 16
Table 4.	Cancer Incidence Counts and Rates by Cancer Type and Gender Elizabeth City and New Jersey, 1998-2002	17
Table 5.	Cancer Incidence Counts and Rates by Cancer Type and Gender Edison Township and New Jersey, 1998-2002	18
Table 6.	Cancer Incidence Counts and Rates by Cancer Type and Gender Woodbridge Township and New Jersey, 1998-2002	19
Table 7.	Cancer Incidence Counts and Rates by Cancer Type and Gender Dover Township and New Jersey, 1998-2002.	20
Table 8.	Cancer Incidence Counts and Rates by Cancer Type and Gender Hamilton Township and New Jersey, 1998-2002	. 21
Table 9.	Cancer Incidence Counts and Rates by Cancer Type and Gender Trenton City and New Jersey, 1998-2002	. 22
Table 10	Cancer Incidence Counts and Rates by Cancer Type and Gender Camden City and New Jersey, 1998-2002	23
Table 11	. 2000 Census Race Distribution, Ten Most Populated Municipalities, New Jersey	24

INTRODUCTION

The purpose of this report is to display counts and age-adjusted cancer incidence rates for New Jersey's ten largest municipalities for the years 1998-2002. This is the first report showing New Jersey State Cancer Registry (NJSCR) data at the municipality level. This is possible now because geocoding of the NJSCR is nearly complete. These ten municipalities represent almost 16 percent of the total New Jersey population according to Census 2000 data.

The ten most populated municipalities in New Jersey are:

- 1. Newark City (273,546) Essex County
- 2. Jersey City (240,055) Hudson County
- 3. Paterson City (149,222) Passaic County
- 4. Elizabeth City (120,568) Union County
- 5. Edison Township (97,687) Middlesex County
- 6. Woodbridge Township (97,203) Middlesex County
- 7. Dover Township (89,706) Ocean County
- 8. Hamilton Township (87,109) Mercer County
- 9. Trenton City (85,403) Mercer County
- 10. Camden City (79,904) Camden County

Included in the report are five-year counts and annual average age-adjusted rates for all types of cancer combined and the seventeen most common cancer types among men and/or women. The seventeen specific cancer types are oral (oropharyngeal) cancer, colorectal cancer, pancreatic cancer, lung cancer, melanoma of the skin, female breast cancer, cervical cancer, endometrial (corpus, uterus NOS) cancer, ovarian cancer, prostate cancer, bladder cancer, cancer of the kidney and renal pelvis, brain cancer, thyroid cancer, Hodgkin lymphoma, non-Hodgkin lymphoma, and leukemia. New Jersey's age-adjusted incidence rates from 1998 to 2002 for these same cancers also are included for comparison with the municipal rates.

Rates by race could not be included; please see the explanation in the technical notes. Some of the differences in rates between the municipalities and the state are probably due to different proportions of the racial groups (see Table 11). For example, lower rates of melanoma of the skin were seen in municipalities that have lower proportions of whites in their population. Melanoma of the skin is much more common among whites than the other racial groups.

Cancer Incidence Rates in New Jersey's Ten Most Populated Municipalities, 1998-2002

Additional New Jersey cancer incidence, mortality, and survival data are available or soon will be available from the Cancer Epidemiology Services office or on our website, http://www.state.nj.us/health/ces/index.shtml, including:

- Cancer Incidence and Mortality in New Jersey 1999-2003;
- Childhood Cancer in New Jersey 1979-2002;
- Cancer Survival in New Jersey 1979-1997; and
- Trends in Cancer Incidence and Mortality in New Jersey 1979-2002.

Our new interactive cancer data mapping application provides incidence and mortality counts and rates statewide and at the county level by year, age, sex, race, and ethnicity for the years 1998-2002 at http://www.cancer-rates.info/nj/. This application will be updated as each additional year's data become complete. Other New Jersey and U.S. cancer data can be found on the following websites:

- Cancer Control Planet http://cancercontrolplanet.cancer.gov/
- North American Association of Central Cancer Registries' Cancer in North America 1998-2002
 - http://www.naaccr.org/index.asp?Col_SectionKey=11&Col_ContentID=50
- Surveillance, Epidemiology, and End Results Program (SEER) Cancer Statistics http://surveillance.cancer.gov/statistics/

TECHNICAL NOTES

New Jersey State Cancer Registry (NJSCR)

NJSCR Overview

The objectives of the New Jersey State Cancer Registry (NJSCR) are to:

- monitor cancer trends in New Jersey;
- promote scientific research;
- respond to New Jersey residents about cancer concerns;
- educate the public;
- provide information for planning and evaluating cancer prevention and control activities; and
- share and compare cancer data with other states and the nation.

The New Jersey State Cancer Registry is a population-based cancer incidence registry that serves the entire state of New Jersey, which has a population of over 8.4 million people. The NJSCR was established by legislation (NJSA 26:2-104 et. seq.) and includes all cases of cancer diagnosed in New Jersey residents since October 1, 1978. New Jersey regulations (NJAC 8:57A) require the reporting of all newly diagnosed cancer cases to the NJSCR within three months of hospital discharge or six months of diagnosis, whichever is sooner. Reports are filed by hospitals, diagnosing physicians, dentists, and independent clinical laboratories. Every hospital in New Jersey reports cancer cases electronically. In addition, reporting agreements are maintained with New York, Pennsylvania, Delaware, Florida, Maryland, and North Carolina so that New Jersey residents diagnosed with cancer outside the state can be identified. Legislation passed in 1996 strengthened the Registry by: requiring electronic reporting; requiring abstracting by certified tumor registrars; and establishing penalties for late or incomplete reporting.

All primary invasive and *in situ* neoplasms are reportable to the NJSCR, except cervical cancer *in situ* diagnosed after 1994 and certain carcinomas of the skin. The information collected by the NJSCR includes basic patient identifiers, demographic characteristics of the patient, medical information on each cancer diagnosis (such as the anatomic site, histologic type and stage of disease), first course of treatment and vital status (alive or deceased) determined annually. For deceased cases, the underlying cause of death is also included. The primary site, behavior, grade, and histology of each cancer are coded according to the *International Classification of Diseases for Oncology (ICD-O)*, 2nd edition for cancers diagnosed through 2000 and the 3rd edition for cancers diagnosed after 2000. The NJSCR follows the data standards promulgated by the North American Association of Central Cancer Registries (NAACCR), including the use of the Surveillance, Epidemiology, and End Results (SEER) multiple primary rules. An individual may develop more than one cancer. Following the SEER multiple primary rules, patients could therefore be counted more than once if they were diagnosed with two or more primary cancers.

The NJSCR is a member of the North American Association of Central Cancer Registries (NAACCR), an organization that sets standards for cancer registries, facilitates data exchange, and publishes cancer data. The NJSCR has been a participant of the National Program of Cancer

Registries (NPCR) sponsored by the Centers for Disease Control and Prevention (CDC) since it began in 1994 and is one of the National Cancer Institute's (NCI) Surveillance, Epidemiology, and End Results (SEER) expansion registries.

NJSCR Data Quality

NAACCR has awarded the Gold Standard, the highest standard possible, to the NJSCR for the quality of the data for each year 1995 through 2002. The NJSCR has consistently achieved the highest level of certification for its data since the inception of this award. The criteria used to judge the quality of the data are completeness of cancer case ascertainment, completeness of certain information on the cancer cases, percent of death certificate only cases, percent of duplicate cases, passing an editing program, and timeliness.

Completeness of reporting to the NJSCR was estimated by comparing New Jersey and U.S. incidence to mortality ratios for whites standardized for age, gender, and cancer site. The data used to generate these ratios were the cancer incidence rates for all SEER registries combined. Using these standard formulae, it is possible for the estimation of completeness to be greater than 100 percent. For the NJSCR 2002 data, the completeness of case reporting was estimated as 102.4 percent at the time this report was prepared.

While our estimates of completeness are very high, some cases of cancer among New Jersey residents who were diagnosed and/or treated in out-of-state facilities may not yet have been reported to the NJSCR by other state registries. This should be considered in interpreting the data for the more recent years. However, these relatively few cases will not significantly affect the cancer rates.

Other 2002 cancer incidence data quality indicators measured were as follows:

```
percent death-certificate-only cases - 1.7 percent;
percent of unresolved duplicates - < 0.1 percent;
percent of cases with unknown race - 1.6 percent;
percent of cases with unknown county - 0.09 percent;
number of cases with unknown age - 9; and
number of cases with unknown gender - 9.
```

It should also be noted that there may be minor differences in the New Jersey incidence rates in this report compared to previous reports, due to ongoing editing and review of the data. The 2002 incidence rates are expected to increase by the time all data are complete, and therefore, are considered preliminary.

The NJSCR continues to work toward improving the quality and number of its reporting sources. Over the past few years, significant improvements have been realized in this regard. For example some of these improvements have resulted in better reporting of skin cancers such as melanoma. One of the most significant improvements has been the implementation of electronic pathology laboratory reporting (E-path) from a national pathology laboratory and several hospital-based laboratories. The ultimate goal is to enable E-path laboratory reporting from every laboratory

that serves New Jersey. E-path reporting is expected to improve the timeliness and completeness of cancer reporting, especially for non-hospitalized cases.

Data Sources and Specifications For This Report

Incidence Data

New Jersey cancer incidence data were taken from the November 2004 analytic file of the New Jersey State Cancer Registry. All the counts, rates and 95 percent confidence intervals were tabulated using SEER*Stat, a statistical software package distributed by the National Cancer Institute - http://seer.cancer.gov/seerstat/.

Population Estimations

The 1990 and 2000 populations by age and gender for each municipality were downloaded from the U.S. Census website. The increments between 1990 and 2000 for each age and gender strata were calculated and used to interpolate the 1998 and 1999 populations and project the 2001 and 2002 populations. The population estimates for the ten municipalities were compared with the New Jersey Department of Labor estimates for total population. The differences were within ± 2.0 percent.

Data Specifications

For this report, cases where the county of residence is unknown were excluded from the New Jersey rates, in accordance with the standard procedures used by SEER, and has been determined to have little effect on the incidence rates. For example, the total number of cases with unknown county for 1998-2002 is 223, representing 0.09% of the total case population. The small numbers of cases of unknown age and/or gender also were excluded from the analyses. Only invasive cancers were included in the incidence data, except *in situ* bladder cancers were included.

Beginning with the year 2001, the coding scheme for incident cancer cases changed from the *International Classification of Diseases for Oncology*, 2^{nd} *edition (ICD-0-2)* to the 3^{rd} *edition (ICD-0-3)*. The following SEER web link contains additional information on the transition from *ICD-0-2* to *ICD-0-3*:

http://training.seer.cancer.gov/module_icdo3/downloadables/ICDO3%20abstract%20n%20article%20NEW%20PDF.pdf. The primary effect of the coding change is that borderline ovarian cancer cases were not included in the 2001 and 2002 data, but were included for the previous years, 1998-2000. This resulted in about 100 fewer cases per year included for 2001 and 2002 in New Jersey.

Geocoding

The NJSCR geocodes the residential address at the time of cancer diagnosis for each case. To ensure accuracy of address information, follow-up with physicians and hospitals to verify address data is conducted prior to the geocoding process. The geocoding process involves matching a case's address to a street level reference map containing its geographic coordinates (latitude and longitude). The NJSCR employs both automated and interactive geocoding. The automated geocoding is done through the New Jersey Office of Information Technology Services (NJOITS). The NJOITS geocoding system employs Integrity software and the most recent street boundary file provided by Tele Atlas. The NJSCR has attempted to geocode all cancer cases beginning with the 1979 cases and updates the registry on a monthly basis. Currently, 96.1 percent of the 1998-2002 cases are geocoded to a street address or, when a street address is missing, are geocoded to the centroid of the zip code. Municipal boundary files were utilized to place the 1998-2002 cases in their municipalities (Tele Atlas, 2005).

The selection criteria for the ten municipalities were:

1) Cases diagnosed in 1998-2002 geocoded to the municipality (by street address or zip code)

or

2) Non-geocoded cases diagnosed in 1998-2002 with a valid historical municipal code.

For the entire state, 1,070 cases (0.5%) diagnosed in 1998-2002 did not have information for either of the two selection criteria. Unfortunately, it would be difficult to determine which of these cases are in the ten municipalities. Since this number represents a very small percentage of the total cases, they probably do not have a significant effect on the municipal rates presented in this report.

Over 90 percent of the cases used in this report were geocoded using the street address to assign the municipality. For this report, the number of cases diagnosed in 1998-2002 that were geocoded to the ten municipalities using the zip code centroid was minimal, representing 906 cases or 3.2 percent of the total geocoded cases. Four percent of the total cases assigned to the ten municipalities were assigned based on their historical municipality code. Historical municipality codes were generated from a computer program that converts spelling variations and strings of the municipality name into a municipal code. The rationale for including non-geocoded cases with historical municipality codes was that 1) there was no information to indicate that the case was not a resident of that municipality and 2) not including these cases would have resulted in a municipality undercount at least as high as six percent, depending on the municipality.

The distribution of geocoded cases versus non-geocoded cases for each municipality is presented in the table below. For example, 95.6 percent of the cases selected for Newark City were geocoded to a census tract within Newark City and 4.4 percent of the cases were assigned to Newark City based on the historical municipal code. The municipality with the highest percentage of geocoded cases was Hamilton Township (98.3%) followed by Woodbridge Township (98.2%), while Camden City had the lowest percentage of geocoded cases (93.5%).

Distribution of Municipality Cases by the Selection Criteria All Invasive Cancer Cases, 1998-2002, New Jersey

	Total Cases*	Geocode	d Cases ^a	with Hi	ded Cases** storical oal Code
		Count	%	Count	%
New Jersey	227,959	219,012	96.1%	7,877	3.5%
Newark City	5,591	5,343	95.6%	248	4.4%
Jersey City	4,726	4,486	94.9%	240	5.1%
Paterson City	2,552	2,455	96.2%	97	3.8%
Elizabeth City	2,326	2,199	94.5%	127	5.5%
Edison Township	2,287	2,188	95.7%	99	4.3%
Woodbridge Township	2,694	2,646	98.2%	48	1.8%
Dover Township	3,095	2,936	94.9%	159	5.1%
Hamilton Township	2,711	2,665	98.3%	46	1.7%
Trenton City	2,038	1,958	96.1%	80	3.9%
Camden City	1,492	1,395	93.5%	97	6.5%
Total Ten Municipalities	29,512	28,271	95.8%	1,241	4.2%

^{*} Represents the total cases that were included in the municipality case counts.

Automated geocoding is not perfect, and errors in municipality assignment could have occurred in the address and zip code geocoding process or in generating historical municipality codes. The number of misassigned cases should be relatively small and not greatly affect the cancer rates for large populations such as those in the ten most populated municipalities.

Race

The populations from the 2000 Census used multiple race categories because individuals could mark one or more races (see Table 11. for detailed data). For agencies such as the National Cancer Institute (NCI) and National Center for Health Statistics (NCHS) to continue reporting long-term trends in disease rates for single-race groups, a method is needed to "bridge" these multi-race classifications into single-race categories. Such a method was developed by NCHS using information collected as part of their National Health Interview Survey (Ingram, 2003). In collaboration with NCHS, the Census Bureau produced a set of year 2000 population estimates that assigned everyone to a single race group. The resulting year 2000 estimates were then used

^a Cases were geocoded based on street address or zip code.

^{**} Statewide, 1,070 cases (0.5%) were not geocoded or assigned a historical municipality code.

Data source: New Jersey State Cancer Registry, New Jersey Department of Health and Senior Services.

to produce an improved set of 1991-2002 population estimates at the state and county levels. The municipality level single race populations are not available from the Census Bureau. Therefore, accurate race-specific cancer incidence rates for municipalities cannot be calculated using the year 2000 Census population data.

Data Presentation

Age-adjusted cancer incidence rates with 95% confidence intervals for all cancer types and selected cancer types are presented separately for males and females. Each municipality's rates are compared with the state rates. To ensure that the data presented in this report are reliable and that confidentiality is maintained, rates and counts were suppressed where counts were fewer than 5.

Calculation of Rates

Age-adjusted Rates and the Year 2000 Standard

The U.S. Department of Health and Human Services requires that health data be age-adjusted using the U.S. year 2000 population as a standard, beginning with the 1999 reporting year. Age-adjustment to the year 2000 population as the standard was first used in one of our earlier reports, *Cancer Incidence and Mortality in New Jersey 1996-2000*, issued in December 2002. Prior to the release of 1999 data, various federal and state agencies calculated disease rates using different U.S. population standards, including the 1940 and 1970 standard populations. Our report *Cancer Incidence and Mortality in New Jersey, 1995-1999*, issued in September 2001, used the former 1970 population standard for all five years and also illustrated the effect on 1999 incidence rates of changing the population standard from 1970 to 2000.

Calculations using the 2000 standard population do not indicate a change in cancer incidence or occurrence - only a different representation of the rates of reported cancer. Using the 2000 population as the standard produces standardized cancer rates that appear to be about 20 percent higher than previously reported.

Rate Calculation Formulas

A cancer incidence rate is defined as the number of new cases of cancer detected during a specified time period in a specified population. Cancer rates are most commonly expressed as cases per 100,000 population. Cancer occurs at different rates in different age groups, and population subgroups defined by gender and race have different age distributions. Therefore, before a valid comparison can be made between rates, it is necessary to standardize the rates to the age distribution of a standard population. In this report, the 2000 U.S. standard million population was used.

The first step in the age-standardization procedure is to determine the age-specific rates. For each age group for a given time interval (within each gender group, for the entire state), the following formula was applied:

$$r_a = \frac{n_a}{t \times P_a}$$

where:

 $r_a =$ the age-specific rate for age group a,

 $n_a =$ the number of events (cancer diagnoses) in the age group during the time interval,

t = the length of the time interval (in years), and

 P_a = average size of the population in the age group during the time interval (mid-year

population or average of mid-year population sizes).

In order to determine the age-adjusted rate, a weighted average of the age-specific rates is calculated, using the age distribution of the standard population to derive the age-specific weighting factors (Rothman, 1986). This is the technique of direct standardization, which uses the following formula:

$$R = \frac{\sum_{a=1}^{n} r_a \times Std. P_a}{\sum_{a=1}^{n} Std. P_a}$$

where:

R =the age-adjusted rate

 r_a = the age-specific rate for age group a, and

Std.P_a = the size of the standard population in each age group a.

While age standardization facilitates the comparison of rates among different populations and different years, there can be important age-specific differences in disease occurrence, which are not apparent in comparisons of the age-adjusted rates (Breslow and Day, 1987).

Confidence Intervals for the Age-adjusted Rates

For this report, 95 percent confidence intervals (CI) around the age-adjusted rates were calculated using the method developed by Fay and Feuer (1997) as described in the SEER*Stat documentation (seer.cancer.gov/seerstat). This method produces similar confidence limits to the standard normal approximation when the counts are large and the population being studied is similar to the standard population.

References

American Cancer Society. Cancer Facts and Figures 2005. American Cancer Society; 2005.

Breslow NE and Day NE. Statistical Methods in Cancer Research. Volume II – The Design and Analysis of Cohort Studies. New York: Oxford University Press, 1987.

Chiang CL. "Standard error of the age-adjusted death rate". In Vital Statistics Special Reports, Vol 47, Num 9. USDHEW, PHS, Washington, D.C. U.S. Government Printing Office, 1961.

Dynamap Street Networks. TELE ATLAS NORTH AMERICA, INC http://www.teleatlas.com

Fay MP, Feuer EJ. Confidence intervals for directly standardized rates: A method based on the Gamma distribution. Statistics in Medicine 1997: 16:791-801.

Fritz A., Percy C. *Implementing ICD-O-3: Impact of the New Edition* SEER Program, National Cancer Institute.

Ingram DD, Parker JD, Schenker N, Weed JA, Hamilton B, Arias E, Madans JH. United States Census 2000 population with bridged race categories. National Center for Health Statistics. Vital Health Stat 2(135). 2003. http://www.cdc.gov/nchs/data/series/sr 02/sr02 135.pdf

Martin RM. Age Standardization of Death Rates in New Jersey: Implications of a Change in the Standard Population. *Topics in Health Statistics*, Center for Health Statistics, 2000;01-02.

Rothman K. Modern Epidemiology. U.S.A. Little, Brown, and Company, 1986.

Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence – SEER 9 Regs Public-Use, Nov 2003 Sub (1973-2001), National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch, released April 2004.

Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Populations - Total U.S. (1969-2001), National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch, released April 2004.

Surveillance Research Program, National Cancer Institute Seer*Stat software (seer.cancer.gov/seerstat) version 6.1

Glossary

Incidence:

The number of newly diagnosed cases of disease occurring in a specific population during a specific time period.

Incidence rate (or crude incidence rate): The number of newly diagnosed cases of disease in a specific population during a specific time period per "x" number of people; usually the time period is one year and the "x" number of people is 100,000.

- **Age-specific incidence rate:** The number of newly diagnosed cases of a disease in a specific age group in a specific population over a specific time period per "x" number of people in the specific age group. Usually five-year age groups (0-4, 5-9, 10-14, etc.) are used. The time period is usually one year and the "x" number of people is 100,000.
- **Age-standardization (or age-adjustment):** The statistical adjustment of crude rates for differences in age distributions in order to compare rates in different populations. There are two types of standardization, direct and indirect.
- Age-adjusted incidence rate: A summary incidence rate that takes into account the age distribution of the population. This is routinely done so that comparisons can be made from year to year. Age-adjustment also enables comparisons among geographic areas. There are several methods to age-adjust; direct standardization is the method most commonly used. With this method, the age-specific incidence rates of the populations of interest (e.g. New Jersey) are applied to a standard population (e.g. 2000 U.S. standard million).

Map and Tables

Map of Ten Most Populated Municipalities in New Jersey

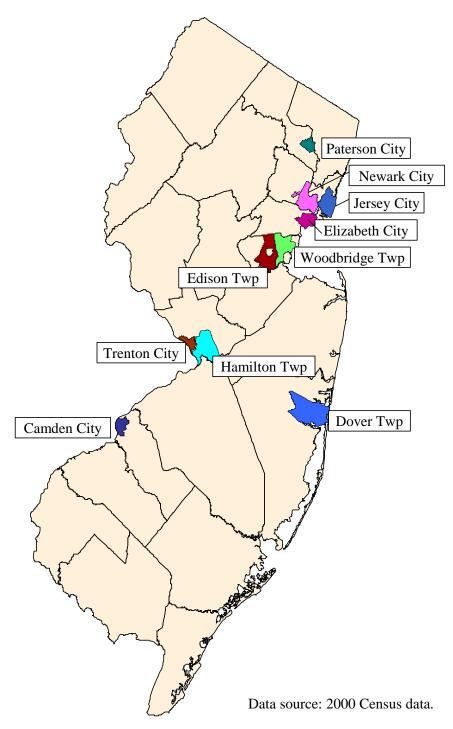


Table 1.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Newark City and New Jersey, 1998-2002

				N	Iale							Fe	emale			
		Newar	k City			New Je	ersey			Newar	k City			New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	3,003	665.6	641.0	690.9	117,863	632.9	629.2	636.5	2,588	411.7	396.0	428.0	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	105	21.8	17.7	26.8	2,898	14.9	14.4	15.5	50	8.0	5.9	10.5	1,519	6.2	5.9	6.5
Colon and Rectum	323	75.5	67.1	84.7	13,763	75.8	74.5	77.0	339	54.7	49.0	60.8	13,918	53.8	52.9	54.7
Pancreas	59	12.6	9.5	16.5	2,514	13.7	13.2	14.3	81	13.1	10.4	16.4	2,860	11.0	10.6	11.4
Lung and Bronchus	461	102.7	93.2	113.0	16,265	88.1	86.7	89.5	317	50.8	45.4	56.7	13,912	55.5	54.6	56.5
Melanoma of the Skin	13	3.0	1.5	5.4	4,154	21.8	21.2	22.5	12	1.9	1.0	3.3	3,195	13.4	13.0	13.9
Breast	~	~	~	~	266	1.4	1.3	1.6	696	111.4	103.2	120.0	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	114	17.6	14.5	21.2	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	149	23.6	20.0	27.8	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	73	11.4	8.9	14.4	4,181	17.4	16.8	17.9
Prostate	992	225.9	211.6	241.0	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	100	23.8	19.2	29.4	8,223	45.6	44.6	46.6	52	8.4	6.3	11.0	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	73	16.1	12.5	20.7	3,629	19.0	18.4	19.7	62	9.8	7.5	12.6	2,306	9.4	9.0	9.7
Brain	28	4.9	3.2	7.6	1,487	7.6	7.2	8.0	21	3.2	2.0	5.0	1,248	5.3	5.0	5.6
Thyroid	12	2.0	1.0	4.0	959	4.7	4.4	5.1	38	5.7	4.0	7.8	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	28	4.8	3.1	7.4	723	3.6	3.3	3.8	13	1.9	1.0	3.3	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	112	21.9	17.8	26.9	4,887	25.9	25.2	26.7	91	14.3	11.5	17.6	4,518	18.2	17.6	18.7
Leukemia	82	17.5	13.7	22.3	3,009	16.2	15.6	16.8	59	9.2	7.0	11.9	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 2.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Jersey City and New Jersey, 1998-2002

				N	Iale							Fe	emale			
		Jersey	City			New Je	ersey			Jersey	City			New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	2,387	582.0	558.1	606.9	117,863	632.9	629.2	636.5	2,339	400.1	384.0	416.7	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	84	18.8	14.9	23.7	2,898	14.9	14.4	15.5	30	5.1	3.4	7.3	1,519	6.2	5.9	6.5
Colon and Rectum	333	85.4	76.2	95.6	13,763	75.8	74.5	77.0	317	53.4	47.7	59.7	13,918	53.8	52.9	54.7
Pancreas	46	11.5	8.3	15.7	2,514	13.7	13.2	14.3	59	10.1	7.7	13.1	2,860	11.0	10.6	11.4
Lung and Bronchus	353	88.5	79.3	98.7	16,265	88.1	86.7	89.5	261	45.4	40.0	51.3	13,912	55.5	54.6	56.5
Melanoma of the Skin	31	8.2	5.4	12.0	4,154	21.8	21.2	22.5	23	4.0	2.5	6.0	3,195	13.4	13.0	13.9
Breast	~	~	~	~	266	1.4	1.3	1.6	639	111.0	102.5	120.0	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	84	14.1	11.2	17.5	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	150	26.0	22.0	30.6	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	106	18.2	14.9	22.1	4,181	17.4	16.8	17.9
Prostate	716	184.5	170.8	199.1	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	94	24.7	19.8	30.6	8,223	45.6	44.6	46.6	47	7.9	5.8	10.6	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	60	13.5	10.3	17.8	3,629	19.0	18.4	19.7	49	8.5	6.3	11.2	2,306	9.4	9.0	9.7
Brain	26	5.3	3.4	8.2	1,487	7.6	7.2	8.0	27	4.4	2.9	6.4	1,248	5.3	5.0	5.6
Thyroid	23	4.7	2.9	7.6	959	4.7	4.4	5.1	54	8.7	6.5	11.4	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	24	4.3	2.7	6.9	723	3.6	3.3	3.8	15	2.3	1.3	3.8	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	112	24.0	19.5	29.3	4,887	25.9	25.2	26.7	101	16.8	13.7	20.5	4,518	18.2	17.6	18.7
Leukemia	61	13.4	10.1	17.7	3,009	16.2	15.6	16.8	50	8.6	6.3	11.3	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 3.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Paterson City and New Jersey, 1998-2002

				N	Iale							Fe	emale			
	l	Paterso	n City			New Je	ersey]	Paterso	n City	7		New Jo	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,330	576.9	544.9	610.6	117,863	632.9	629.2	636.5	1,222	378.7	357.6	400.7	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	54	22.4	16.6	30.1	2,898	14.9	14.4	15.5	24	7.3	4.7	10.9	1,519	6.2	5.9	6.5
Colon and Rectum	158	74.4	62.8	87.9	13,763	75.8	74.5	77.0	168	53.7	45.9	62.5	13,918	53.8	52.9	54.7
Pancreas	30	13.8	9.1	20.5	2,514	13.7	13.2	14.3	40	12.8	9.1	17.5	2,860	11.0	10.6	11.4
Lung and Bronchus	198	88.7	76.3	102.8	16,265	88.1	86.7	89.5	128	40.9	34.1	48.7	13,912	55.5	54.6	56.5
Melanoma of the Skin	10	3.7	1.7	7.7	4,154	21.8	21.2	22.5	10	3.1	1.5	5.8	3,195	13.4	13.0	13.9
Breast	6	2.2	0.8	5.7	266	1.4	1.3	1.6	333	102.1	91.4	113.7	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	54	15.3	11.5	20.1	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	61	19.0	14.5	24.5	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	33	10.2	7.0	14.5	4,181	17.4	16.8	17.9
Prostate	439	196.7	178.1	217.0	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	39	19.7	13.8	27.6	8,223	45.6	44.6	46.6	30	9.7	6.6	13.9	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	44	18.0	12.9	24.9	3,629	19.0	18.4	19.7	31	9.7	6.6	13.8	2,306	9.4	9.0	9.7
Brain	15	4.6	2.5	8.6	1,487	7.6	7.2	8.0	17	4.9	2.9	8.0	1,248	5.3	5.0	5.6
Thyroid	7	2.4	1.0	5.9	959	4.7	4.4	5.1	27	7.5	4.9	11.0	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	10	3.0	1.4	6.6	723	3.6	3.3	3.8	9	2.6	1.2	5.0	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	49	17.5	12.6	24.0	4,887	25.9	25.2	26.7			8.4	16.3	4,518	18.2	17.6	18.7
Leukemia	36	14.8	10.1	21.4	3,009	16.2	15.6	16.8	32	9.8	6.7	13.9	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

Table 4.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Elizabeth City and New Jersey, 1998-2002

				N	Iale							Fe	emale			
	F	Clizabet	th City	7		New Je	ersey		F	Elizabe	th City	7		New J	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,234	580.3	547.5	614.7	117,863	632.9	629.2	636.5	1,092	378.8	356.6	402.1	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	28	12.4	8.2	18.5	2,898	14.9	14.4	15.5	18	6.1	3.6	9.8	1,519	6.2	5.9	6.5
Colon and Rectum	138	66.9	55.9	79.6	13,763	75.8	74.5	77.0	151	51.7	43.7	60.7	13,918	53.8	52.9	54.7
Pancreas	27	13.2	8.6	19.8	2,514	13.7	13.2	14.3	30	10.3	6.9	14.8	2,860	11.0	10.6	11.4
Lung and Bronchus	189	89.4	76.8	103.7	16,265	88.1	86.7	89.5	91	31.7	25.5	39.0	13,912	55.5	54.6	56.5
Melanoma of the Skin	21	10.3	6.3	16.3	4,154	21.8	21.2	22.5	19	6.3	3.8	9.9	3,195	13.4	13.0	13.9
Breast	~	~	~	~	266	1.4	1.3	1.6	315	111.3	99.3	124.4	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	43	14.9	10.8	20.1	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	76	27.1	21.4	34.0	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	43	15.2	11.0	20.5	4,181	17.4	16.8	17.9
Prostate	406	197.3	178.3	218.1	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	74	36.7	28.7	46.6	8,223	45.6	44.6	46.6	27	8.9	5.8	13.0	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	41	18.7	13.3	25.9	3,629	19.0	18.4	19.7	25	8.9	5.8	13.2	2,306	9.4	9.0	9.7
Brain	10	3.9	1.8	8.0	1,487	7.6	7.2	8.0	19	6.3	3.8	9.9	1,248	5.3	5.0	5.6
Thyroid	8	2.8	1.2	6.4	959	4.7	4.4	5.1	29	9.9	6.6	14.4	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	13	4.1	2.2	7.8	723	3.6	3.3	3.8	12	3.8	2.0	6.8	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	44	19.1	13.7	26.4	4,887	25.9	25.2	26.7			12.5	22.5	,		17.6	
Leukemia	26	11.7	7.5	17.7	3,009	16.2	15.6	16.8	18	5.9	3.5	9.5	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 5.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Edison Township and New Jersey, 1998-2002

				N	Iale							Fe	emale			
	Ed	lison T	ownsh	ip		New Je	ersey		Ed	lison T	ownsh	ip		New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,220	585.5	552.3	620.5	117,863	632.9	629.2	636.5	1,067	400.7	377.0	425.7	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	29	12.0	8.0	18.0	2,898	14.9	14.4	15.5	12	4.5	2.3	8.2	1,519	6.2	5.9	6.5
Colon and Rectum	144	71.8	60.2	85.4	13,763	75.8	74.5	77.0	117	43.4	35.8	52.2	13,918	53.8	52.9	54.7
Pancreas	22	10.8	6.7	17.0	2,514	13.7	13.2	14.3	29	10.7	7.2	15.6	2,860	11.0	10.6	11.4
Lung and Bronchus	171	82.3	70.2	96.3	16,265	88.1	86.7	89.5	116	43.6	36.0	52.5	13,912	55.5	54.6	56.5
Melanoma of the Skin	29	12.5	8.4	18.7	4,154	21.8	21.2	22.5	21	7.9	4.9	12.3	3,195	13.4	13.0	13.9
Breast	~	~	?	~	266	1.4	1.3	1.6	332	125.0	111.9	139.4	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	19	7.0	4.2	11.2	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	57	21.5	16.3	28.0	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	49	18.5	13.7	24.7	4,181	17.4	16.8	17.9
Prostate	421	204.0	184.6	225.3	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	61	29.5	22.4	38.6	8,223	45.6	44.6	46.6	17	6.3	3.6	10.3	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	36	16.0	11.2	22.9	3,629	19.0	18.4	19.7	19	7.0	4.2	11.2	2,306	9.4	9.0	9.7
Brain	16	7.2	4.1	12.4	1,487	7.6	7.2	8.0	14	5.6	3.1	9.7	1,248	5.3	5.0	5.6
Thyroid	12	4.8	2.5	9.3	959	4.7	4.4	5.1	34	12.9	8.9	18.2	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	5	2.3	0.8	6.4	723	3.6	3.3	3.8	11	4.3	2.1	7.9	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	47	23.2	16.8	31.8	4,887	25.9	25.2	26.7	59	22.2	16.9	28.8	4,518	18.2	17.6	18.7
Leukemia	32	15.0	10.2	21.9	3,009	16.2	15.6	16.8	32	12.0	8.2	17.2	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

 $[\]sim$ Statistic not displayed due to fewer than 5 cases.

Table 6.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Woodbridge Township and New Jersey, 1998-2002

				N	Iale							Fe	male			
	Wood	lbridge	e Town	ship		New Je	ersey		Wood	lbridge	e Town	ıship		New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,437	674.2	638.3	712.2	117,863	632.9	629.2	636.5	1,257	445.5	421.0	471.3	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	30	13.4	8.9	20.4	2,898	14.9	14.4	15.5	20	7.2	4.4	11.5	1,519	6.2	5.9	6.5
Colon and Rectum	188	93.4	79.8	109.4	13,763	75.8	74.5	77.0	171	58.2	49.8	68.0	13,918	53.8	52.9	54.7
Pancreas	26	12.5	7.9	19.7	2,514	13.7	13.2	14.3	33	11.8	8.1	16.9	2,860	11.0	10.6	11.4
Lung and Bronchus	217	100.1	86.9	115.5	16,265	88.1	86.7	89.5	186	62.9	54.1	73.0	13,912	55.5	54.6	56.5
Melanoma of the Skin	33	13.9	9.6	20.6	4,154	21.8	21.2	22.5	19	6.8	4.1	11.0	3,195	13.4	13.0	13.9
Breast	~	~	~	~	266	1.4	1.3	1.6	325	118.1	105.5	132.0	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	20	7.3	4.5	11.7	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	91	32.4	26.0	40.1	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	47	18.0	13.2	24.2	4,181	17.4	16.8	17.9
Prostate	428	200.9	181.7	222.3	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	98	49.6	39.7	61.9	8,223	45.6	44.6	46.6	31	11.1	7.5	16.1	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	42	18.8	13.4	26.6	3,629	19.0	18.4	19.7	39	13.7	9.7	19.1	2,306	9.4	9.0	9.7
Brain	19	7.8	4.6	13.4	1,487	7.6	7.2	8.0	10	3.7	1.8	7.2	1,248	5.3	5.0	5.6
Thyroid	14	5.6	3.1	10.9	959	4.7	4.4	5.1	32	12.4	8.5	17.9	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	12	4.9	2.5	10.0	723	3.6	3.3	3.8	~	۲	1	~	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	76	36.5	28.3	47.0	4,887	25.9	25.2	26.7	46	16.3	11.9	22.2	4,518	18.2	17.6	18.7
Leukemia	34	16.9	11.4	25.0	3,009	16.2	15.6	16.8	35	12.6	8.8	17.9	2,353	9.6	9.2	10.0

 ${\it In~situ}$ cancers are excluded except bladder cancers ${\it in~situ}$ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 7.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Dover Township and New Jersey, 1998-2002

				N	Iale							Fe	emale			
	De	over To	wnshi	p	,	New Je	ersey		D	over To	ownshi	ip		New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,608	653.8	621.7	687.3	117,863	632.9	629.2	636.5	1,487	481.5	456.8	507.4	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	37	14.6	10.3	20.5	2,898	14.9	14.4	15.5	21	6.8	4.2	11.0	1,519	6.2	5.9	6.5
Colon and Rectum	216	89.7	77.9	103.1	13,763	75.8	74.5	77.0	173	51.2	43.8	60.0	13,918	53.8	52.9	54.7
Pancreas	28	11.8	7.8	17.5	2,514	13.7	13.2	14.3	30	9.3	6.2	13.8	2,860	11.0	10.6	11.4
Lung and Bronchus	252	101.8	89.4	115.6	16,265	88.1	86.7	89.5	211	66.1	57.4	76.1	13,912	55.5	54.6	56.5
Melanoma of the Skin	65	26.9	20.7	34.8	4,154	21.8	21.2	22.5	43	15.1	10.8	20.9	3,195	13.4	13.0	13.9
Breast	~	~	٧	~	266	1.4	1.3	1.6	454	148.9	135.3	163.8	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	24	9.0	5.6	13.9	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	84	27.6	21.9	34.6	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	51	17.0	12.6	22.9	4,181	17.4	16.8	17.9
Prostate	526	206.6	189.1	225.5	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	100	40.9	33.1	50.2	8,223	45.6	44.6	46.6	40	12.4	8.8	17.4	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	46	18.6	13.6	25.3	3,629	19.0	18.4	19.7	24	7.6	4.8	11.9	2,306	9.4	9.0	9.7
Brain	20	7.8	4.7	12.5	1,487	7.6	7.2	8.0	13	4.1	2.1	7.6	1,248	5.3	5.0	5.6
Thyroid	18	7.5	4.4	12.3	959	4.7	4.4	5.1	41	17.3	12.3	23.8	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	8	4.0	1.7	8.2	723	3.6	3.3	3.8	6	2.7	1.0	6.3	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	54	22.9	17.2	30.2	4,887	25.9	25.2	26.7	57	18.5	13.9	24.5	4,518	18.2	17.6	18.7
Leukemia	42	18.9	13.5	26.0	3,009	16.2	15.6	16.8	36	11.7	8.1	16.9	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 8.

Cancer Incidence Counts and Rates by Cancer Type and Gender Hamilton Township and New Jersey, 1998-2002

				N	Iale							Fe	emale			
	Han	nilton '	Towns:	hip		New Je	ersey		Har	nilton '	Towns	hip		New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,359	642.5	608.3	678.4	117,863	632.9	629.2	636.5	1,352	471.2	446.0	497.7	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	38	17.5	12.4	24.5	2,898	14.9	14.4	15.5	19	6.5	3.9	10.7	1,519	6.2	5.9	6.5
Colon and Rectum	172	81.9	70.0	95.7	13,763	75.8	74.5	77.0	171	54.4	46.4	63.7	13,918	53.8	52.9	54.7
Pancreas	30	13.7	9.2	20.1	2,514	13.7	13.2	14.3	32	10.0	6.8	14.6	2,860	11.0	10.6	11.4
Lung and Bronchus	207	96.7	83.8	111.3	16,265	88.1	86.7	89.5	148	50.8	42.8	60.1	13,912	55.5	54.6	56.5
Melanoma of the Skin	61	29.0	22.1	37.7	4,154	21.8	21.2	22.5	42	15.3	11.0	21.1	3,195	13.4	13.0	13.9
Breast	~	۲	~	~	266	1.4	1.3	1.6	398	143.1	129.2	158.3	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	29	11.2	7.4	16.4	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	101	36.6	29.7	44.8	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	43	15.1	10.9	20.8	4,181	17.4	16.8	17.9
Prostate	399	185.9	167.9	205.6	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	92	44.9	36.0	55.6	8,223	45.6	44.6	46.6	24	7.7	4.9	12.0	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	37	17.1	12.0	24.0	3,629	19.0	18.4	19.7	31	10.4	7.1	15.3	2,306	9.4	9.0	9.7
Brain	26	11.9	7.8	18.0	1,487	7.6	7.2	8.0	13	4.6	2.4	8.4	1,248	5.3	5.0	5.6
Thyroid	12	5.6	2.9	10.4	959	4.7	4.4	5.1	38	15.9	11.2	22.2	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	6	2.9	1.0	6.9	723	3.6	3.3	3.8	6	2.4	0.9	5.8	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	49	23.9	17.5	32.1	4,887	25.9	25.2	26.7	52	16.9	12.6	22.7	4,518	18.2	17.6	18.7
Leukemia	28	13.4	8.8	19.8	3,009	16.2	15.6	16.8	31	10.8	7.2	15.9	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 9.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Trenton City and New Jersey, 1998-2002

				N	Iale							Fe	male			
	'	Trento	n City			New Je	ersey		,	Trento	n City			New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	1,053	669.5	629.2	712.0	117,863	632.9	629.2	636.5	985	448.9	421.0	478.3	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	42	25.1	18.0	34.4	2,898	14.9	14.4	15.5	24	11.0	7.0	16.6	1,519	6.2	5.9	6.5
Colon and Rectum	110	72.6	59.5	88.1	13,763	75.8	74.5	77.0	132	57.6	48.0	68.5	13,918	53.8	52.9	54.7
Pancreas	17	11.4	6.6	18.7	2,514	13.7	13.2	14.3	33	14.2	9.8	20.2	2,860	11.0	10.6	11.4
Lung and Bronchus	213	135.5	117.7	155.5	16,265	88.1	86.7	89.5	130	60.1	50.1	71.6	13,912	55.5	54.6	56.5
Melanoma of the Skin	11	7.5	3.7	13.9	4,154	21.8	21.2	22.5	12	5.2	2.7	9.3	3,195	13.4	13.0	13.9
Breast	~	~	~	~	266	1.4	1.3	1.6	247	116.7	102.4	132.4	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	33	16.2	11.1	22.9	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	48	22.4	16.4	29.8	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	21	10.4	6.4	16.0	4,181	17.4	16.8	17.9
Prostate	323	211.0	188.4	235.8	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	43	27.9	20.1	38.0	8,223	45.6	44.6	46.6	23	10.1	6.4	15.3	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	29	17.7	11.8	26.0	3,629	19.0	18.4	19.7	17	8.0	4.7	13.0	2,306	9.4	9.0	9.7
Brain	8	4.2	1.8	9.1	1,487	7.6	7.2	8.0	10	4.4	2.1	8.3	1,248	5.3	5.0	5.6
Thyroid	~	~	~	~	959	4.7	4.4	5.1	23	11.2	7.1	17.0	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	6	2.8	1.0	7.1	723	3.6	3.3	3.8	6	2.8	1.0	6.3	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	24	14.3	9.0	21.9	4,887	25.9	25.2	26.7	40		12.6	24.3	4,518	18.2	17.6	18.7
Leukemia	27	16.9	11.0	25.2	3,009	16.2	15.6	16.8	24	10.6	6.8	16.0	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

[~] Statistic not displayed due to fewer than 5 cases.

Table 10.

Cancer Incidence Counts and Rates by Cancer Type and Gender
Camden City and New Jersey, 1998-2002

				N	Iale							Fe	emale			
	(Camde	n City			New Je	ersey			Cam	den			New Je	ersey	
	Count	Rate	95%	6 CI	Count	Rate	95%	_o CI	Count	Rate	95%	6 CI	Count	Rate	95%	6 CI
All Sites	788	705.7	654.4	760.9	117,863	632.9	629.2	636.5	704	452.5	419.5	487.6	111,645	453.8	451.1	456.5
Oral Cavity and Pharynx	30	25.5	16.8	38.7	2,898	14.9	14.4	15.5	12	7.8	4.0	13.8	1,519	6.2	5.9	6.5
Colon and Rectum	80	72.6	56.6	92.8	13,763	75.8	74.5	77.0	103	68.6	55.9	83.3	13,918	53.8	52.9	54.7
Pancreas	12	10.7	5.3	21.0	2,514	13.7	13.2	14.3	16	10.5	6.0	17.2	2,860	11.0	10.6	11.4
Lung and Bronchus	166	155.5	131.4	183.7	16,265	88.1	86.7	89.5	104	68.1	55.6	82.7	13,912	55.5	54.6	56.5
Melanoma of the Skin	7	6.5	2.4	15.8	4,154	21.8	21.2	22.5	5	3.1	1.0	7.6	3,195	13.4	13.0	13.9
Breast	~	~	~	~	266	1.4	1.3	1.6	160	103.0	87.6	120.5	32,771	136.3	134.8	137.8
Cervix Uteri	*	*	*	*	*	*	*	*	38	23.5	16.5	32.5	2,324	10.0	9.6	10.5
Corpus and Uterus, NOS	*	*	*	*	*	*	*	*	44	28.7	20.8	38.6	7,000	29.0	28.3	29.7
Ovary	*	*	*	*	*	*	*	*	25	16.2	10.4	24.1	4,181	17.4	16.8	17.9
Prostate	225	210.4	182.6	242.2	37,705	201.4	199.4	203.5	*	*	*	*	*	*	*	*
Urinary Bladder	15	13.0	7.2	23.4	8,223	45.6	44.6	46.6	13	9.0	4.8	15.5	3,101	12.1	11.6	12.5
Kidney and Renal Pelvis	15	14.2	7.8	25.3	3,629	19.0	18.4	19.7	18	11.0	6.5	17.6	2,306	9.4	9.0	9.7
Brain	8	5.0	2.0	13.1	1,487	7.6	7.2	8.0	~	~	١	7	1,248	5.3	5.0	5.6
Thyroid	~	~	~	~	959	4.7	4.4	5.1	23	13.4	8.4	20.5	2,927	13.0	12.5	13.5
Hodgkin Lymphoma	5	2.9	0.9	10.2	723	3.6	3.3	3.8	6	2.8	1.0	6.7	676	3.1	2.9	3.4
Non-Hodgkin Lymphoma	40	30.9	21.4	44.6	4,887	25.9	25.2	26.7	22	13.6	8.5	20.9	4,518	18.2	17.6	18.7
Leukemia	17	11.3	6.4	20.7	3,009	16.2	15.6	16.8	12	7.5	3.8	13.4	2,353	9.6	9.2	10.0

In situ cancers are excluded except bladder cancers in situ are included.

CI - Confidence Interval

^{*} Non-applicable gender

 $[\]sim$ Statistic not displayed due to fewer than 5 cases.

Table 11.
2000 Census Race Distribution
Ten Most Populated Municipalities, New Jersey

Geographic area	Total Population	White (Single Race)		Black (Single Race)		API (Single Race)		Other * (Single Race)		Two or More Races**	
		Count	%	Count	%	Count	%	Count	%	Count	%
NEW JERSEY	8,414,350	6,104,705	72.6%	1,141,821	13.6%	483,605	5.7%	470,464	5.6%	213,755	2.5%
Newark City	273,546	72,537	26.5%	146,250	53.5%	3,398	1.2%	39,435	14.4%	11,926	4.4%
Jersey City	240,055	81,637	34.0%	67,994	28.3%	39,062	16.3%	37,351	15.6%	14,011	5.8%
Paterson City	149,222	45,913	30.8%	49,095	32.9%	2,915	2.0%	42,085	28.2%	9,214	6.2%
Elizabeth City	120,568	67,250	55.8%	24,090	20.0%	2,885	2.4%	19,282	16.0%	7,061	5.9%
Edison Township	97,687	58,116	59.5%	6,728	6.9%	28,634	29.3%	2,105	2.2%	2,104	2.2%
Woodbridge Township	97,203	68,848	70.8%	8,507	8.8%	14,078	14.5%	3,379	3.5%	2,391	2.5%
Dover Township	89,706	83,939	93.6%	1,568	1.7%	2,228	2.5%	967	1.1%	1,004	1.1%
Hamilton Township	87,109	74,173	85.1%	7,112	8.2%	2,265	2.6%	2,029	2.3%	1,530	1.8%
Trenton City	85,403	27,802	32.6%	44,465	52.1%	915	1.1%	9,490	11.1%	2,731	3.2%
Camden City	79,904	13,454	16.8%	42,628	53.3%	2,017	2.5%	18,674	23.4%	3,131	3.9%

API - Asian or Pacific Islander

Source: U.S. Census Bureau, Census 2000 and New Jersey State Data Center, New Jersey Department of Labor. URL: http://www.wnjpin.net/OneStopCareerCenter/LaborMarketInformation/lmi25/pl94/cnty/table6.xls Accessed on July 27, 2005.

^{*} Includes all other responses to the census 2000 form not included in the "White", "Black" or "Asian or Pacific Islander" categories. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic Latino group (for example Mexican, Puerto Rican, or Cuban) in the "Some other race" write-in space are included in this category.

^{**} For the 2000 Census, individuals were allowed to mark two or more race groups resulting in a new multiple race category.